

LISTING OF CLAIMS:

The present listing of claims replaces all prior listings or versions of claims in the present application.

1. (Currently Amended) A corrosion-resistant metal made sensor for measuring mass flow rate and pressure of fluid, comprising:

(a) ~~characterized by that it is so constituted that the mass flow rate and pressure of fluid are measured by its being equipped with a mass flow rate sensor part comprising~~

i. _____ a corrosion-resistant metal substrate; and

ii. _____ a thin film forming a temperature sensor and a heater installed on at the back face side of at the fluid contacting surface of the said corrosion-resistant substrate; and

(b) a pressure sensor part comprising a thin film forming a strain sensor element installed on the back face side of the fluid contacting surface of the corrosion-resistant metal substrate.

2. (Currently Amended) A corrosion-resistant metal made sensor for fluid as claimed in Claim 1, wherein ~~the it is so constituted that a corrosion-resistant metal substrate is fitted into at the mounting groove of a corrosion-resistant metal made sensor base such that the in a state in which its~~ fluid contacting surface is exposed outwardly, and at the peripheral edge of the corrosion-resistant metal substrate is hermetically welded to the sensor base.

3. (Currently Amended) A corrosion-resistant metal made sensor for fluid as claimed in Claim 1, wherein ~~or Claim 2 is so made that the output drift to the pressure of the mass flow rate sensor part is corrected by the output of the pressure sensor part.~~

4. (Currently Amended) A corrosion-resistant metal made sensor for fluid as claimed in Claim 1, ~~wherein the Claim 2 or Claim 3 is so made that a thin film includes~~ is constituted with an insulation film formed on the back side of the fluid contacting surface of the corrosion-resistant metal substrate, a metal film ~~that which~~ forms ~~the~~a temperature sensor, ~~the~~a heater and a strain sensor element, and a protection film ~~covering to cover~~ the insulating film and the metal film.

5. (Currently Amended) A fluid supply device ~~that employs for which~~ the corrosion-resistant metal made sensor according to Claim 1 for fluid is employed characterized by that a corrosion-resistant metal made sensor for fluid stipulated in one of ~~Claims 1 to 4~~ is mounted on a fluid controller in order that the flow rate and pressure of fluid ~~is can be~~ appropriately checked at ~~the~~ time of the fluid control.

6. (Currently Amended) A fluid supply device ~~that employs for which~~ the corrosion-resistant metal made sensor according to for fluid is employed characterized by that it is so constituted that a sensor base of the corrosion-resistant metal made sensor for fluid in Claim 2, wherein the sensor base is positioned inside ~~at~~ the fluid passage of a body equipped with the ~~afore-mentioned~~ fluid passage that communicatesfor communicating between ~~at~~ the flow-in inlet for the fluid and ~~at~~ the flow-out outlet for the fluid by installing a metal gasket in order that hermeticity between the body and the sensor base is held by thrusting by the metal gasket through ~~the mediation of the afore-mentioned sensor base~~, and at the same time stiffness of ~~at~~ the structural component disposed directly above the metal gasket to relatively raises~~hold the afore-mentioned hermeticity between the body and the sensor base is relatively~~

raised, thus suppressing the strain of the mass flow rate sensor part and the pressure sensor part caused by thrusting by the said metal gasket.

7. (NEW) A corrosion-resistant metal made sensor as claimed in Claim 2, wherein output drift to pressure of the mass flow rate sensor part is corrected by output of the pressure sensor part.

8. (NEW) A corrosion-resistant metal made sensor as claimed in Claim 7, wherein the thin film includes an insulation film formed on the back side of the fluid contacting surface of the corrosion-resistant metal substrate, a metal film that forms the temperature sensor, the heater and a strain sensor element, and a protection film covering the insulating film and the metal film.

9. (NEW) A corrosion-resistant metal made sensor as claimed in Claim 2, wherein the thin film includes an insulation film formed on the back side of the fluid contacting surface of the corrosion-resistant metal substrate, a metal film that forms the temperature sensor, the heater and a strain sensor element, and a protection film covering the insulating film and the metal film.

10. (NEW) A corrosion-resistant metal made sensor as claimed in Claim 3, wherein the thin film includes an insulation film formed on the back side of the fluid contacting surface of the corrosion-resistant metal substrate, a metal film that forms the temperature sensor, the heater and a strain sensor element, and a protection film covering the insulating film and the metal film.

11. (NEW) A fluid supply device that employs the corrosion-resistant metal made sensor according to Claim 2 mounted on a fluid controller in order that flow rate and pressure of fluid is appropriately checked at a time of fluid control.

12. (NEW) A fluid supply device that employs the corrosion-resistant metal made sensor according to Claim 3 mounted on a fluid controller in order that flow rate and pressure of fluid is appropriately checked at a time of fluid control.

13. (NEW) A fluid supply device that employs the corrosion-resistant metal made sensor according to Claim 4 mounted on a fluid controller in order that flow rate and pressure of fluid is appropriately checked at a time of fluid control.